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PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70) **10/525432**

Applicant's or agent's file reference P21704PCAU	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).	
International Application No. PCT/AU2003/001083	International Filing Date (day/month/year) 26 August 2003	Priority Date (day/month/year) 26 August 2002
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ F28F 25/10		
Applicant JOTT AUSTRALIA PTY. LTD. et al		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 3 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 7 sheet(s).</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 22 March 2004	Date of completion of the report 17 December 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer MATTHEW FRANCIS Telephone No. (02) 6283 2424

I. Basis of the report**1. With regard to the elements of the international application:***

- ☐ the international application as originally filed.
- ☒ the description, pages 1, 2, 6-12, as originally filed,
pages , filed with the demand,
pages 3, 4, 5, received on 24 September 2004 with the letter of 24 September 2004
- ☒ the claims, pages 15, as originally filed,
pages , as amended (together with any statement) under Article 19,
pages 17, filed with the demand,
pages 13, 14, 16, received on 24 September 2004 with the letter of 24 September 2004
- ☒ the drawings, pages 1-6, as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-24	YES
	Claims	NO
Inventive step (IS)	Claims	YES
	Claims 1-24	NO
Industrial applicability (IA)	Claims 1-24	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

NOVELTY (N)

Claims : 1-24

D1 : DD 298706

D2 : GB 1455544

D3 : US 4690207

None of the above citations disclose a method/apparatus for enhancing the performance of an existing 'wet type' natural draft cooling tower including an impeller when rotated at a specified speed about an upright axis of rotation centrally located in the cooling tower passage in a specified operating condition of the tower to increase the flow rate of air in the passage and the impeller being supported above the heat transfer means of the tower drawing air upwardly through the heat transfer means and into the tower.

INVENTIVE STEP (IS)

Claims 1-24: The teaching of the documents D1, D2 and D3, collectively and individually, is that it is known to use fans to assist the flow of natural-draft, wet-type cooling towers. D2 also indicates that such fan-assisted cooling towers may be run with variable assistance or even without assistance in order to adjust the capacity of the system for varying requirements. The documents do not disclose the concept of applying fans to pre-existing cooling towers to increase their capacities. However, it is common practice to retro-fit improvements to existing equipment to prolong their useful service life or upgrade their performance. Additionally, there is no evidence of any difficulty to be overcome in such a retro-fit. Positioning of impeller (fan) at a particular point such as at the base or the hyperbolic neck of the cooling tower to augment the flow of air in the cooling tower passage does not add an inventive step and hence, it is not considered inventive to apply the teachings of the citations to existing cooling towers.